

**IN THE CLAIMS:**

*Please amend the claims as follows:*

1. (Currently Amended) A method of controlling a loop-back process between a local device and a remote device in an Ethernet passive optical network, the method comprising the steps of:

(a) providing a predetermined field in a loop-back control OAM PDU (operation, administration, and maintenance - packet data unit), the predetermined field having distinguishing messages for an initiation of the loop-back process and a termination of the loop-back process; and

(b) the local device and the remote device performing the loop-back process using the loop-back control OAM PDU without sending OAM PDU information messages, which includes an initiation of the loop-back process and a termination of the loop-back process, using the loop-back control OAM PDU,

wherein the loopback process performed by using the loop-back control OAM PDU into which the distinguishing messages of the predetermined fields are added, further comprises:

a loopback process initiation step of transmitting, by the local device, a loop-back control OAM PDU requesting the initiation of the loop-back process to the remote device; and

a loopback process termination step of transmitting, by the local device, a loop-back control OAM PDU requesting the termination of the loopback process to the remote device.

2. (Currently Amended) ~~The method loop-back as claimed in claim 1~~ A method of controlling a loop-back process between a local device and a remote device in an Ethernet

passive optical network, the method comprising the steps of:

(a) providing a predetermined field in a loop-back control OAM PDU (operation, administration, and maintenance - packet data unit), the predetermined field having distinguishing messages for an initiation of the loop-back process and a termination of the loop-back process; and

(b) the local device and the remote device performing the loop-back process, which includes an initiation of the loop-back process and a termination of the loop-back process, using the loop-back control OAM PDU,

wherein the loopback process performed by using the loop-back control OAM PDU into which the distinguishing messages of the predetermined field are added, further comprises:

a loopback process initiation step of transmitting, by the local device, a loop-back control OAM PDU requesting the initiation of the loop-back process to the remote device; and

a loopback process termination step of transmitting, by the local device, a loop-back control OAM PDU requesting the termination of the loopback process to the remote device,

wherein the predetermined field ~~comprises~~ includes one of:

a first field value representing a message requesting an initiation of a loop-back process;

a second field value representing a message acknowledging the initiation request message of the loop-back process;

a third field value representing a message requesting a termination of the loop-back process from the local device to the remote device;

a fourth field value representing a message ~~a message~~ requesting a termination of the

loop-back process from the remote device to the local device; and

a fifth field value representing a message acknowledging the fourth field value from the local device to the remote device.

3. (Previously Presented) The method loop-back as claimed in claim 1, wherein the loop-back process initiation step further includes:

transmitting, by the remote device, the loop-back control OAM PDU acknowledging the initiation of the loop-back process to the local device.

4. (Currently Amended) ~~The method loop-back as claimed in claim 1~~ A method of controlling a loop-back process between a local device and a remote device in an Ethernet passive optical network, the method comprising the steps of:

(a) providing a predetermined field in a loop-back control OAM PDU (operation, administration, and maintenance - packet data unit), the predetermined field having distinguishing messages for an initiation of the loop-back process and a termination of the loop-back process; and

(b) the local device and the remote device performing the loop-back process, which includes an initiation of the loop-back process and a termination of the loop-back process, using the loop-back control OAM PDU,

wherein the loopback process performed by using the loop-back control OAM PDU into which the distinguishing messages of the predetermined field are added, further comprises:

a loopback process initiation step of transmitting, by the local device, a loop-back

control OAM PDU requesting the initiation of the loop-back process to the remote device; and

a loopback process termination step of transmitting, by the local device, a loop-back control OAM PDU requesting the termination of the loopback process to the remote device,

wherein the loop-back process termination step further includes:

transmitting, by the local device, the loop-back control OAM PDU acknowledging the termination of the loop-back process to the remote device.

5. (Currently Amended) ~~The method loop-back as claimed in claim 1~~ A method of controlling a loop-back process between a local device and a remote device in an Ethernet passive optical network, the method comprising the steps of:

(a) providing a predetermined field in a loop-back control OAM PDU (operation, administration, and maintenance - packet data unit), the predetermined field having distinguishing messages for an initiation of the loop-back process and a termination of the loop-back process; and

(b) the local device and the remote device performing the loop-back process, which includes an initiation of the loop-back process and a termination of the loop-back process, using the loop-back control OAM PDU,

wherein the loopback process performed by using the loop-back control OAM PDU into which the distinguishing messages of the predetermined field are added, further comprises:

a loopback process initiation step of transmitting, by the local device, a loop-back control OAM PDU requesting the initiation of the loop-back process to the remote device; and

a loopback process termination step of transmitting, by the local device, a loop-back

control OAM PDU requesting the termination of the loopback process to the remote device,

wherein the loop-back process termination step includes the steps of:

sensing, by the remote device, a termination of a predetermined time of the loop-back process;

transmitting, by the remote device, a loop-back control OAM PDU requesting the termination of the loop-back process to the local device; and

transmitting, by the local device, a loop-back control OAM PDU acknowledging the termination of the loop-back process to the remote device.